



**SIDDHARTHA INSTITUTE OF SCIENCE AND TECHNOLOGY:: PUTTUR
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QUESTION BANK (DESCRIPTIVE)

Subject with Code: COMPUTER NETWORKS(18CS0515) **Course & Branch:** B.Tech - CSE

Year & Sem: III-B.Tech & I-Sem

Regulation: R18

**UNIT –I
INTRODUCTION**

1	a	Define computer network	[L1][CO1]	[2M]
	b	List the layers in OSI reference model	[L1][CO1]	[2M]
	c	Name the functions of network layer	[L1][CO1]	[2M]
	d	Define throughput	[L1][CO1]	[2M]
	e	Describe the process in single mode step index fiber	[L1][CO1]	[2M]
2	a	Compare Connection oriented and connectionless service.	[L4][CO1]	[5M]
	b	Discover the design issues of layers	[L2][CO1]	[5M]
3		Explain in detail about Fiber optic cable	[L2][CO1]	[10M]
4	a	Explain about Twisted pair cable	[L2][CO1]	[5M]
	b	Briefly explain about Coaxial cable	[L2][CO1]	[5M]
5	a	Review various Network topologies	[L2][CO1]	[8M]
	b	State the process in simplex method	[L1][CO1]	[2M]
6		Write about OSI network model	[L3][CO1]	[10M]
7		Compare OSI and TCP/IP Network models	[L4][CO1]	[10M]
8		Explain in detail about TCP /IP Network model	[L2][CO1]	[10M]
9	a	Describe about various network types	[L2][CO1]	[5M]
	b	Illustrate the architecture of Internet	[L4][CO1]	[5M]
10	a	Explain of wireless transmission media	[L2][CO1]	[8M]
	b	List the different types of transmission media	[L1][CO1]	[2M]

UNIT –II
INTRODUCTION TO DATALINK LAYER

1	a	State the process of flow control	[L1][CO2]	[2M]
	b	Define ARP	[L1][CO2]	[2M]
	c	State the use of forward error correction	[L1][CO2]	[2M]
	d	List the two line discipline mechanisms	[L1][CO2]	[2M]
	e	Describe the process of stop and wait protocol	[L1][CO2]	[2M]
2	a	State the process of Stop and Wait ARQ	[L2][CO2]	[2M]
	b	Discuss bit-oriented HDLC Protocol with the elaborative explanation of its frames	[L2][CO2]	[8M]
3	a	Identify the difference between damaged frame and lost frame	[L1][CO2]	[2M]
	b	Solve Cyclic Redundancy check method used for error detection	[L3][CO2]	[8M]
4	a	Sketch the HDLC frame	[L1][CO2]	[2M]
	b	Extend about the Elementary data link protocols	[L2][CO2]	[8M]
5	a	Describe the process of U-Frame	[L1][CO2]	[3M]
	b	Write about the services provided by the Data link layer	[L1][CO2]	[7M]
6	a	List the address fields of PPP	[L1][CO2]	[2M]
	b	Write about Point to Point (PPP) protocol in detail	[L3][CO2]	[8M]
7	a	Discuss about GO BACK N Protocol	[L2][CO2]	[5M]
	b	Selective repeat Protocol	[L2][CO2]	[5M]
8		Relate and explain Pure ALOHA and slotted ALOHA protocols	[L3][CO2]	[10M]
9		Explain about CSMA/CA protocol.	[L2][CO2]	[10M]
10		Generalize the Controlled access protocols which are used in MAC sublayer.	[L2][CO2]	[10M]

UNIT –III
THE NETWORK LAYER

1	a	List the Network layer design issues.	[L1][CO3]	[2M]
	b	Quote optimality principle.	[L1][CO3]	[2M]
	c	Explain the process in broadcasting.	[L1][CO3]	[2M]
	d	Define spanning tree.	[L1][CO3]	[2M]
	e	Give the use of multicast routing.	[L1][CO3]	[2M]
2	a	List different items, which the network can differ.	[L2][CO3]	[2M]
	b	Explain in detail about congestion control algorithms.	[L2][CO3]	[8M]
3	a	List out any five principles of network layer in the Internet.	[L2][CO3]	[3M]
	b	Discover in detail about IPv6 protocol.	[L2][CO3]	[7M]
4	a	Calculate the Shortest Path Algorithm considering an example.	[L3][CO3]	[7M]
	b	Explain Flooding.	[L2][CO3]	[3M]
5	a	Extend the BGP – Exterior Gateway routing protocol.	[L2][CO3]	[3M]
	b	Write about Internet control protocols.	[L3][CO3]	[7M]
6	a	Explain distance vector routing algorithm.	[L2][CO3]	[5M]
	b	Briefly state what is count to infinity problem?	[L2][CO3]	[5M]
7	a	Illustrate about leaky bucket algorithm.	[L3][CO3]	[5M]
	b	Discuss Token bucket algorithm with neat diagram .	[L2][CO3]	[5M]
8		Illustrate Link State Routing algorithm to find the route and ages of routers.	[L2][CO3]	[10M]
9		Sketch and explain in detail about IPV4 protocol.	[L3][CO3]	[10M]
10		compare Virtual circuit network and Datagram network with diagrams.	[L4][CO3]	[10M]

UNIT –IV
THE TRANSPORT LAYER

1	a	List any three differences between TCP & UDP.	[L4][CO4]	[2M]
	b	Give the Use of multiplexing.	[L1][CO4]	[2M]
	c	Define RPC.	[L1][CO4]	[2M]
	d	What is the process of marshaling?	[L1][CO4]	[2M]
	e	Expand the following a) DCCP b) SCTP c) SST d) TSAP	[L1][CO4]	[2M]
2	a	List the transport service primitives.	[L1][CO4]	[3M]
	b	Explain about the elements of transport layer.	[L2][CO4]	[7M]
3		Illustrate the different Primitives used for transport service. Elaborate them.	[L2][CO4]	[10M]
4		Explain in detail about each field of TCP segment header.	[L2][CO4]	[10M]
5		Explain the three way handshake protocols with suitable diagram.	[L2][CO4]	[10M]
6	a	Describe about i) TCP connection Establishment	[L1][CO4]	[5M]
	b	ii) TCP Connection Release	[L1][CO4]	[5M]
7	a	Identify the problems occur during connection establishment.	[L2][CO4]	[2M]
	b	Explain in detail about congestion control in TCP.	[L2][CO4]	[8M]
8		Correlate the various timers used by TCP to perform its various operations	[L4][CO4]	[10M]
9	a	What is the use of real time transport protocol?	[L1][CO4]	[3M]
	b	Write in detail about performance issues of transport layer.	[L3][CO4]	[7M]
10	a	Explain the TCP protocol with neat sketch.	[L2][CO4]	[5M]
	b	Write in detail about User Datagram Protocol (UDP).	[L3][CO4]	[5M]

UNIT –V
INTRODUCTION TO APPLICATION LAYER

1	a	State the purpose of SNMP.	[L1][CO5]	[2M]
	b	Discuss the purpose of domain name system.	[L2][CO5]	[2M]
	c	Tell the responsibilities of application layer.	[L1][CO5]	[2M]
	d	Label the types of messages in HTTP transaction.	[L1][CO5]	[2M]
	e	What is the use of File Transfer Protocol?	[L1][CO5]	[2M]
2		Write in detail about DNS Name Space and Domain Resource records.	[L3][CO5]	[10M]
3	a	List out the four main properties of HTTP.	[L1][CO5]	[2M]
	b	Explain in detail about function and structure of e-mail protocol.	[L2][CO5]	[8M]
4		Explain briefly about SMTP protocol.	[L2][CO5]	[10M]
5		Discuss in detail about World Wide Web.	[L2][CO5]	[10M]
6		Summarize in detail about cookies.	[L2][CO5]	[10M]
7	a	Write about static web pages.	[L3][CO5]	[5M]
	b	Explain about dynamic web pages.	[L2][CO5]	[5M]
8		Discuss the features of HTTP and explain how HTTP works.	[L2][CO5]	[10M]
9	a	Name the basic functions of E-Mail.	[L1][CO5]	[3M]
	b	Write about TELNET.	[L3][CO5]	[7M]
10		Discuss about File Transfer Protocol with neat diagram.	[L2][CO5]	[10M]

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